IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

INTERNATIONAL LICENSE EXCHANGE OF AMERICA, LLC Plaintiff, v. ADTRAN, INC., Defendants.	**Civil Action No. ______________** **JURY TRIAL DEMANDED**

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff International License Exchange of America ("ILEA" or "Plaintiff"), for its Complaint against Defendant ADTRAN, Inc. ("ADTRAN" or "Defendant"), alleges the following:

NATURE OF THE ACTION

1. This is an action for patent infringement arising under the Patent Laws of the United States, 35 U.S.C. § 1 *et seq*.

THE PARTIES

2. Plaintiff is a corporation organized under the laws of the State of Delaware with a place of business at 10 Balligomingo Rd., West Conshohocken, PA 19428.

3. Upon information and belief, ADTRAN is a corporation organized and existing under the laws of Delaware, with a place of business at 901 Explorer Blvd. NW, Huntsville, AL 35806 (Madison County), and can be served through its registered agent at the Corporation Trust Company, Corporation Trust Center, 1209 Orange St., Wilmington, DE 19801. Upon information and belief, ADTRAN sells and offers to sell products and services throughout the United States, including in this judicial district, and introduces products and services into the

stream of commerce and that incorporate infringing technology knowing that they would be sold in this judicial district and elsewhere in the United States.

JURISDICTION AND VENUE

4. This is an action for patent infringement arising under the Patent Laws of the United States, Title 35 of the United States Code.

5. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a). Further, the patent asserted has already been the subject of a case transferred to this Court under Case No.: 1:15−cv−00869−SLR.

6. Venue is proper in this judicial district under 28 U.S.C. §§ 1391(b), (c), (d) and/or 1400(b). On information and belief, Defendant conducts business in this District, the claims alleged in this Complaint arise in this District, and the acts of infringement have taken place and are continuing to take place in this District.

7. On information and belief, Defendant is subject to this Court's general and specific personal jurisdiction because Defendant has sufficient minimum contacts within the State of Delaware and this District, pursuant to due process and/or the Delaware Long Arm Statute because Defendant purposefully availed itself of the privileges of conducting business in the State of Delaware and in this District, because Defendant regularly conducts and solicits business within the State of Delaware and within this District, and because Plaintiff's causes of action arise directly from Defendant's business contacts and other activities in the State of Delaware and this District. Further, this Court has personal jurisdiction over the Defendant because ADTRAN is incorporated in Delaware and have purposely availed itself of the privileges and benefits of the laws of the State of Delaware.

COUNT I – INFRINGEMENT OF U.S. PATENT NO. RE40,999

8. The allegations set forth in the foregoing paragraphs 1 through 7 are incorporated into this First Claim for Relief.

9. On November 24, 2009, U.S. Patent No. RE40,999 ("the '999 patent"), entitled "VLAN Frame Format," was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the '999 patent is attached as Exhibit 1.

10. The inventive embodiments of the '999 patent resolve technical problems related to virtual local area network ("VLAN") and methods to format a data frame in VLAN network devices.

11. The claims of the '999 patent do not merely recite the performance of some business practice known from the pre-Internet world along with a requirement to perform it on the Internet. Instead, the claims of the '999 patent recite one or more inventive concepts that are rooted in computerized electronic data communications networks, and an improved method operate such networks and to maintain the interoperability of different physical configurations of such networks.

12. The claims of the '999 patent recite an invention that is not merely the routine or conventional use of electronic devices for communications. Instead, among other things, the invention adds new features to integrate Ethernet and other protocols together on a shared network. The '999 patent claims thus include improvements for, for example, formatting data frames to yield a desired result.

13. The technology claimed in the '999 patent does not preempt all ways of using computerized devices or transmitting information over networks, nor preempt any other well-known or prior art technology.

14. Accordingly, each claim of the ’999 patent recites a combination of elements sufficient to ensure that the claim in practice amounts to significantly more than a patent on an ineligible concept.

15. Plaintiff is the assignee and owner of the right, title and interest in and to the ’999 patent, including the right to assert all causes of action arising under said patents and the right to any remedies for infringement of them.

16. Upon information and belief, Defendant had and continued to directly infringe at least claims 1, 7, 11 and 12 of the ’999 patent by having made, used, sold, imported and/or provided for use without authority within the United States, a method to format a data frame in VLAN network devices; for example, depending on the physical configuration of a VLAN, the embodiments include a method to adjust the format of a data frame to reflect the characteristics of the particular physical configuration of the VLAN (the "’999 Accused Instrumentalities"). The ’999 Accused Instrumentalities include at least ADTRAN’s devices that practice IEEE 802.1Q or tagging for VLANs or 802.1x for WLANs: ADTRAN NetVanta 800 series routers/gateways, 8000 series switches/access devices (*e.g.* 8008, 8044M), 1335 routers; 3140, 5305; ADTRAN IP 650, 706, 712, 5000 IP phones; Total Access 301 GPON, 311 GPON, 324, 351, 352, 361, 362, 372, 1100F, 5000 series (*e.g.* 5004, 5006) access devices and interfaces; OPT-6100; MX408e Pseudowire Gateway; hiX 5600 SHDSL line cards; NetVanta 1234(P), 1238(P), 1131, 1534(P), 1544(P), 1544F, 1638(P), 1235P, 1535P, 3448(P), 3458(P), 1335(P), 6355, 3130, 3120 Ethernet switches/routers. These products include any replacement devices for discontinued devices. Wireless LAN solutions include ProCloud, ProCloud Plus, (Bluesocket) vWLAN. Services include Enhanced Network Care; Total Network Care, ProStart, ProCare, and ProCloud (Plus).

17. In particular, claim 1 of the ’999 patent generally recites a method of identifying a virtual network associated with a data frame when transmitting the data frame between a communications medium and a shared communications medium; where the method comprises: a) receiving the data frame from the communications medium, where the data frame includes a first type field and a data field; b) inserting a second type field at a location within the data frame preceding the first type field, a value of the second type field indicating the data frame include a virtual network identifier field, c) inserting the virtual network identifier field at a location between the second type field and the first type field; d) assigning a first value to the virtual network identifier field, the first value corresponding to the virtual network; and e) transmitting the data frame over the shared communications medium.

18. On information and belief, use of the ’999 Accused Instrumentalities read on and infringe at least claim 1 of the ’999 patent. (*See, e.g.*, http://portal.adtran.com/web/page/portal/Adtran/product/1174801G1; http://portal.adtran.com/web/page/portal/Adtran/product/1187025G1; http://portal.adtran.com/web/page/portal/Adtran/group/15; https://portal.adtran.com/web/page/portal/Adtran/group/4411; https://adtran.com/web/appmanager/portal/Adtran?_nfpb=true&newsearch_2d-3998489-p=6&_pageLabel=waverunner_page_search; https://supportforums.adtran.com/thread/5331; http://portal.adtran.com/pub/Library/Product_Brochures/Default/EN1025_NV_Switch_BR.pdf; https://portal.adtran.com/pub/Library/Data_Sheets/Default_Public/AD10034_Wireless_Solutions.pdf; https://portal.adtran.com/web/page/portal/Adtran/group/4044; product datasheets for each named example products such as https://www.manualslib.com/manual/944036/Adtran-Netvanta-7000-Series.html;

http://portal.adtran.com/pub/Library/Data_Sheets/Default_Public/61700515E2-8_NV1335.pdf; https://portal.adtran.com/web/page/portal/Adtran/wp_proservices; http://portal.adtran.com/web/page/portal/Adtran/wp_networkcare_landing. *Also see* the IEEE Standard for Local and metropolitan area networks: Media Access Control (MAC) Bridges and Virtual Bridge Local Area Networks, IEEE Std 802.1QTM-2011 (Revision of IEEE Std 802.1Q-2005), 31 August 2011 (*e.g.* p. 1, 23, 98, 103-105, 149-150, 1269); IEEE Std 802.1QTM-2014; IEEE Std 802.3TM-2012 (*e.g.* p. 53); IEEE 802.1Q VLAN Tutorial (Graham Shaw, *available at* http://www.microhowto.info/tutorials/802.1q.html, accessed April 4, 2016); https://wiki.openwrt.org/doc/howto/wireless.security.8021x.)

19. Claim 7 of the ’999 patent generally recites the method of identifying a virtual network associated with a data frame when transmitting the data frame between a communications medium and a shared communications medium, where the method comprises: a) receiving the data frame from the communications medium, the data frame including a length field and a data field; b) inserting a type field at a location within the data frame preceding the length field, a value of the type field indicating the data frame includes a virtual network identifier field; c) inserting the virtual network identifier field at a location between the type field and the length field, d) assigning a first value to the virtual network identifier field, the first value corresponding to the virtual network; and e) transmitting the data frame over the shared communications medium.

20. On information and belief, use of the ’999 Accused Instrumentalities read on and infringe at least claim 7 of the ’999 patent. (*See, e.g.*, http://portal.adtran.com/web/page/portal/Adtran/product/1174801G1; http://portal.adtran.com/web/page/portal/Adtran/product/1187025G1;

http://portal.adtran.com/web/page/portal/Adtran/group/15; https://portal.adtran.com/web/page/portal/Adtran/group/4411; https://adtran.com/web/appmanager/portal/Adtran?_nfpb=true&newsearch_2d-3998489-p=6&_pageLabel=waverunner_page_search; https://supportforums.adtran.com/thread/5331; http://portal.adtran.com/pub/Library/Product_Brochures/Default/EN1025_NV_Switch_BR.pdf; https://portal.adtran.com/pub/Library/Data_Sheets/Default_Public/AD10034_Wireless_Solutions.pdf; https://portal.adtran.com/web/page/portal/Adtran/group/4044; product datasheets for each named example products such as https://www.manualslib.com/manual/944036/Adtran-Netvanta-7000-Series.html; http://portal.adtran.com/pub/Library/Data_Sheets/Default_Public/61700515E2-8_NV1335.pdf; https://portal.adtran.com/web/page/portal/Adtran/wp_proservices; http://portal.adtran.com/web/page/portal/Adtran/wp_networkcare_landing. *Also see* the IEEE Standard for Local and metropolitan area networks: Media Access Control (MAC) Bridges and Virtual Bridge Local Area Networks, IEEE Std 802.1QTM-2011 (Revision of IEEE Std 802.1Q-2005), 31 August 2011 (*e.g.* p. 1, 23, 98, 103-105, 149-150, 1269); IEEE Std 802.1QTM-2014; IEEE Std 802.3TM-2012 (*e.g.* p. 53); IEEE 802.1Q VLAN Tutorial (Graham Shaw, *available at* http://www.microhowto.info/tutorials/802.1q.html, accessed April 4, 2016); https://wiki.openwrt.org/doc/howto/wireless.security.8021x.)

21. Claim 11 of the ’999 patent generally recites, in a network device, a method of transmitting a virtual network identifier in a data frame transmitted on a shared communications medium coupled to the network device, comprising: a) transmitting a preamble field, b) transmitting a destination and source media access control address field; c) transmitting a first type field whose contents indicate the virtual network identifier is present in the data frame; d)

transmitting a virtual network identifier field containing the virtual network identifier; e) transmitting a second type field whose contents indicate a protocol type associated with the data frame; and, f) transmitting a data field.

22. On information and belief, use of the ’999 Accused Instrumentalities read on and infringe at least claim 11 of the ’999 patent. (*See*, *e.g.*, http://portal.adtran.com/web/page/portal/Adtran/product/1174801G1; http://portal.adtran.com/web/page/portal/Adtran/product/1187025G1; http://portal.adtran.com/web/page/portal/Adtran/group/15; https://portal.adtran.com/web/page/portal/Adtran/group/4411; https://adtran.com/web/appmanager/portal/Adtran?_nfpb=true&newsearch_2d-3998489-p=6&_pageLabel=waverunner_page_search; https://supportforums.adtran.com/thread/5331; http://portal.adtran.com/pub/Library/Product_Brochures/Default/EN1025_NV_Switch_BR.pdf; https://portal.adtran.com/pub/Library/Data_Sheets/Default_Public/AD10034_Wireless_Solutions.pdf; https://portal.adtran.com/web/page/portal/Adtran/group/4044; product datasheets for each named example products such as https://www.manualslib.com/manual/944036/Adtran-Netvanta-7000-Series.html; http://portal.adtran.com/pub/Library/Data_Sheets/Default_Public/61700515E2-8_NV1335.pdf; https://portal.adtran.com/web/page/portal/Adtran/wp_proservices; http://portal.adtran.com/web/page/portal/Adtran/wp_networkcare_landing. *Also see* the IEEE Standard for Local and metropolitan area networks: Media Access Control (MAC) Bridges and Virtual Bridge Local Area Networks, IEEE Std 802.1QTM-2011 (Revision of IEEE Std 802.1Q-2005), 31 August 2011 (*e.g.* p. 1, 23, 98, 103-105, 149-150, 1269); IEEE Std 802.1QTM-2014; IEEE Std 802.3TM-2012 (*e.g.* p. 53); IEEE 802.1Q VLAN Tutorial (Graham Shaw, *available at*

http://www.microhowto.info/tutorials/802.1q.html, accessed April 4, 2016); https://wiki.openwrt.org/doc/howto/wireless.security.8021x.)

23. Claim 12 of the ’999 patent generally recites the method of claim 11, wherein the virtual network identifier field is 4 bytes.

24. On information and belief, use of the ’999 Accused Instrumentalities read on and infringe at least claim 12 of the ’999 patent. (*See*, *e.g.*, the IEEE Standard for Local and metropolitan area networks: Media Access Control (MAC) Bridges and Virtual Bridge Local Area Networks, IEEE Std 802.1QTM-2011 (Revision of IEEE Std 802.1Q-2005), 31 August 2011 (*e.g*. p. 1, 23, 98, 103-105, 149-150, 1269); IEEE Std 802.1QTM-2014; IEEE Std 802.3TM-2012 (*e.g*. p. 53); IEEE 802.1Q VLAN Tutorial (Graham Shaw, *available at* http://www.microhowto.info/tutorials/802.1q.html, accessed April 4, 2016).)

25. On information and belief, these ’999 Accused Instrumentalities were used marketed, provided to, and/or used by or for Defendant’s partners, clients, customers and end users across the country and in this District.

26. Plaintiff has been harmed by Defendant’s infringing activities.

COUNT II – INFRINGEMENT OF U.S. PATENT NO. 5,959,990

27. The allegations set forth in the foregoing paragraphs 1 through 26 are incorporated into this Second Claim for Relief.

28. On September 28, 1999, U.S. Patent No. 5,959,990 (“the ’990 patent”), entitled “VLAN Frame Format,” was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the ’990 patent is attached as Exhibit 2.

29. The inventive embodiments of the ’990 patent resolve technical problems related to virtual local area network (“VLAN”) and methods to format a data frame in VLAN network devices.

30. The claims of the ’990 patent do not merely recite the performance of some business practice known from the pre-Internet world along with a requirement to perform it on the Internet. Instead, the claims of the ’990 patent recite one or more inventive concepts that are rooted in computerized electronic data communications networks, and an improved method operate such networks and to maintain the interoperability of different physical configurations of such networks.

31. The claims of the ’990 patent recite an invention that is not merely the routine or conventional use of electronic devices for communications. Instead, for example, the invention adds new features to integrate Ethernet and other protocols together on a shared network. The ’990 patent claims thus include improvements for, for example, formatting data frames to yield a desired result.

32. The technology claimed in the ’990 patent does not preempt all ways of using computerized devices or transmitting information over networks, nor preempt any other well-known or prior art technology.

33. Accordingly, each claim of the ’990 patent recites a combination of elements sufficient to ensure that the claim in practice amounts to significantly more than a patent on an ineligible concept.

34. Plaintiff is the assignee and owner of the right, title and interest in and to the ’990 patent, including the right to assert all causes of action arising under the patents and the right to any remedies for infringement of them.

35. Upon information and belief, Defendant had and continued to directly infringe at least claim 1 of the ’990 patent by having made, used, sold, imported and/or provided for use without authority within the United States, a method to transmit a data frame in VLAN network devices; for example, depending on the physical configuration of a VLAN, the embodiments include a system to transmit a formatted data frame to reflect the characteristics of the particular physical configuration of the VLAN (the "’990 Accused Instrumentalities"). The ’990 Accused Instrumentalities include at least ADTRAN’s devices that practice IEEE 802.1Q or tagging for VLANs or 802.1x for WLANs: ADTRAN NetVanta 800 series routers/gateways, 8000 series switches/access devices (*e.g*. 8008, 8044M), 1335 routers; 3140, 5305; ADTRAN IP 650, 706, 712, 5000 IP phones; Total Access 301 GPON, 311 GPON, 324, 351, 352, 361, 362, 372, 1100F, 5000 series (*e.g*. 5004, 5006) access devices and interfaces; OPT-6100; MX408e Pseudowire Gateway; hiX 5600 SHDSL line cards; NetVanta 1234(P), 1238(P), 1131, 1534(P), 1544(P), 1544F, 1638(P), 1235P, 1535P, 3448(P), 3458(P), 1335(P), 6355, 3130, 3120 Ethernet switches/routers; These products include any replacement devices for discontinued devices. Wireless LAN solutions include ProCloud, ProCloud Plus, (Bluesocket) vWLAN. Services include Enhanced Network Care; Total Network Care, ProStart, ProCare, and ProCloud (Plus).

36. In particular, claim 1 of the ’990 patent generally recites a method in a network device. The method includes transmitting, on a shared communications medium coupled to the network device, a data frame associated with a virtual network, comprising the steps of: a) transmitting a data frame having a type field whose contents indicate the data frame comprises a virtual network identifier field; and, b) transmitting the virtual network identifier field whose contents indicate the virtual network associated with the data frame.

37. On information and belief, use of the '990 Accused Instrumentalities read on and infringe at least claim 1 of the '990 patent. (*See*, *e.g.*: http://portal.adtran.com/web/page/portal/Adtran/product/1174801G1; http://portal.adtran.com/web/page/portal/Adtran/product/1187025G1; http://portal.adtran.com/web/page/portal/Adtran/group/15; https://portal.adtran.com/web/page/portal/Adtran/group/4411; https://adtran.com/web/appmanager/portal/Adtran?_nfpb=true&newsearch_2d-3998489-p=6&_pageLabel=waverunner_page_search; https://supportforums.adtran.com/thread/5331; http://portal.adtran.com/pub/Library/Product_Brochures/Default/EN1025_NV_Switch_BR.pdf; https://portal.adtran.com/pub/Library/Data_Sheets/Default_Public/AD10034_Wireless_Solutions.pdf; https://portal.adtran.com/web/page/portal/Adtran/group/4044; product datasheets for each named example products such as https://www.manualslib.com/manual/944036/Adtran-Netvanta-7000-Series.html; http://portal.adtran.com/pub/Library/Data_Sheets/Default_Public/61700515E2-8_NV1335.pdf; https://portal.adtran.com/web/page/portal/Adtran/wp_proservices; http://portal.adtran.com/web/page/portal/Adtran/wp_networkcare_landing. *Also see* the IEEE Standard for Local and metropolitan area networks: Media Access Control (MAC) Bridges and Virtual Bridge Local Area Networks, IEEE Std 802.1QTM-2011 (Revision of IEEE Std 802.1Q-2005), 31 August 2011 (*e.g.* p. 1, 23, 98, 103-105, 149-150, 1269); IEEE Std 802.1QTM-2014; and IEEE Std 802.3TM-2012 (*e.g.* p. 53); IEEE 802.1Q VLAN Tutorial (Graham Shaw, *available at* http://www.microhowto.info/tutorials/802.1q.html, accessed April 4, 2016); https://wiki.openwrt.org/doc/howto/wireless.security.8021x.)

38. On information and belief, these ’990 Accused Instrumentalities were used, marketed, provided to, and/or used by or for Defendant’s partners, clients, customers and end users across the country and in this District.

39. Plaintiff has been harmed by Defendant’s infringing activities.

COUNT III – INFRINGEMENT OF U.S. PATENT NO. 6,970,461

40. The allegations set forth in the foregoing paragraphs 1 through 39 are incorporated into this Third Claim for Relief.

41. On November 29, 2005, U.S. Patent No. 6,970,461 (“the ’461 patent”), entitled “Access Control Enhancements for Delivery of Video and Other Service,” was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the ’461 patent is attached as Exhibit 3.

42. The inventions of the ’461 patent resolve technical problems related to shared medium access networks such as for satellites, video services, cable modem and optic fiber networks. For example, the invention embodiments provide secure multicast service over a shared medium access network by using an Internet Group Management Protocol (“IGMP”) vetting function in the customer premises equipment. The methods include controlling data traffic transmitted over the network or other communication system when there are multiple users attempting to transmit data over the shared network or system.

43. The claims of the ’461 patent do not merely recite the performance of some business practice known from the pre-Internet world along with a requirement to perform it on the Internet. Instead, the claims of the ’461 patent recite one or more inventive concepts that are rooted in wired or wireless electronic or opto-electronic communication network technology and related devices, or the use of such devices for electronic communications, and overcome

problems specifically arising in the realm of electronic or opto-electronic communication networks and systems.

44. The claims of the ’461 patent recite an invention that is not merely the routine or conventional use of communication networks. Instead, among other things, the invention adds new features that overcome network problems. The ’461 patent claims thus include methods for adding features to customer premise equipment to perform a vetting function to yield a desired result.

45. The technology claimed in the ’461 patent does not preempt all ways of using communication network devices, nor preempt any other well-known or prior art technology.

46. Accordingly, each claim of the ’461 patent recites a combination of elements sufficient to ensure that the claim in practice amounts to significantly more than a patent on an ineligible concept.

47. Plaintiff is the assignee and owner of the right, title and interest in and to the ’461 patent, including the right to assert all causes of action arising under said patents and the right to any remedies for infringement of them.

48. Upon information and belief, Defendant has and continues to directly infringe at least claim 11 of the ’461 patent by making, using, selling, importing and/or providing and/or causing to be used without authority within the United States, an improved method of providing a secure multicast service over a shared medium access network such as by using an IGMP vetting function (the "’461 Accused Instrumentalities"). The ’461 Accused Instrumentalities include at least ADTRAN 424RG gateway; 508VP MDU GPON; 401 Micro GPON or 401 Micro FTTH; Total Access 5000 series access devices and interfaces, 301 GPON, 311 GPON, 411 GPON, 1100F with modem, 1200F DSLAM; NV6355 gateway, NV7100 IP phone.

Services include Enhanced Network Care; Total Network Care, ProStart, ProCare, and ProCloud.

49. In particular, claim 11 of the ’461 patent generally recites a method of providing a secure multicast service over a shared medium access network through using an IGMP vetting function in customer premises equipment.

50. On information and belief, use of the ’461 Accused Instrumentalities read on and infringe at least claim 11 of the ’461 patent. (*See*, *e.g.*, http://portal.adtran.com/pub/Library/Data_Sheets/Default_Public/61287781F1-8%20ADTRAN%20424RG.pdf, http://portal.adtran.com/web/page/portal/Adtran/product/1187020G1, http://portal.adtran.com/web/page/portal/Adtran/group/3436, http://portal.adtran.com/web/page/portal/Adtran/group/3811, ttps://supportforums.adtran.com/thread/4872, http://portal.adtran.com/web/page/portal/Adtran/product/1287786G1, http://portal.adtran.com/web/page/portal/Adtran/product/1287787F1; https://portal.adtran.com/web/page/portal/Adtran/wp_proservices; http://portal.adtran.com/web/page/portal/Adtran/wp_networkcare_landing; and RFC4605 (*available at* http://www.rfc-base.org/txt/rfc-4605.txt) and https://tools.ietf.org/html/rfc4605); and RFC 3376 (*available at* https://tools.ietf.org/html/rfc3376 and https://tools.ietf.org/html/rfc3376) (accessed April 8, 2016).)

51. On information and belief, these ’461 Accused Instrumentalities are used, marketed, provided to, and/or used by or for Defendant’s partners, clients, customers and end users across the country and in this District.

52. Defendant was made aware of the ’461 patent and its infringement thereof at least as early as the filing of this Complaint.

53. Upon information and belief, since at least the time Defendant received notice, Defendant has induced and continues to induce others to infringe at least one claim of the ’461 patent under 35 U.S.C. § 271(b) by, among other things, and with specific intent or willful blindness, actively aiding and abetting others to infringe, including but not limited to Defendant’s partners, clients, customers, and end users, whose use of the ’461 Accused Instrumentalities constitutes direct infringement of at least one claim of the ’461 patent.

54. In particular, Defendant’s actions that aid and abet others such as its partners, customers, clients, and end users to infringe include advertising and distributing the ’461 Accused Instrumentalities and providing instruction materials, training, and services regarding the ’461 Accused Instrumentalities. On information and belief, Defendant has engaged in such actions with specific intent to cause infringement or with willful blindness to the resulting infringement because Defendant has had actual knowledge of the ’461 patent and knowledge that its acts were inducing infringement of the ’461 patent since at least the date Defendant received notice that such activities infringed the ’461 patent.

55. Upon information and belief, since at least the time Defendant received notice, Defendant is liable as a contributory infringer of the ’461 patent under 35 U.S.C. § 271(c) by offering to sell, selling and/or importing into the United States at least one or more components of the ’461 Accused Instrumentalities to be especially made or adapted for use in an infringement of the ’461 patent. The ’461 Accused Instrumentalities are a material component for use in practicing the ’461 patent and are specifically made and are not a staple article of commerce suitable for substantial non-infringing use.

56. Plaintiff has been harmed by Defendant's infringing activities.

COUNT IV – INFRINGEMENT OF U.S. PATENT NO. 7,478,167

57. The allegations set forth in the foregoing paragraphs 1 through 56 are incorporated into this Fourth Claim for Relief.

58. On January 13, 2009, U.S. Patent No. 7,478,167 ("the '167 patent"), entitled "Resource Allocation Using An Auto-Discovery Mechanism For Provider-Provisioned Layer-2 and Layer-3 Virtual Private Networks," was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the '167 patent is attached as Exhibit 4.

59. The inventive embodiments of the '167 patent resolve technical problems related to Virtual Private Networks ("VPN") that includes a method for resource allocation for implementing VPN services using an auto-discovery process.

60. The claims of the '167 patent do not merely recite the performance of some business practice known from the pre-Internet world along with a requirement to perform it on the Internet. Instead, the claims of the '167 patent recite one or more inventive concepts that are rooted in computerized electronic data communications networks, and an improved method to establish or maintain VPN data-transmission tunnels.

61. The claims of the '167 patent recite an invention that is not merely the routine or conventional use of electronic devices for data transmission networks. Instead, among other things, the invention adds new features to advertise and/or auto-discover a tunnel parameter. The '167 patent claims thus include improvements for, for example, formatting data frames to yield a desired result.

62. The technology claimed in the ’167 patent does not preempt all ways of using computerized devices or transmitting information over networks, nor preempt any other well-known or prior art technology.

63. Accordingly, each claim of the ’167 patent recites a combination of elements sufficient to ensure that the claim in practice amounts to significantly more than a patent on an ineligible concept.

64. Plaintiff is the assignee and owner of the right, title and interest in and to the ’167 patent, including the right to assert all causes of action arising under said patents and the right to any remedies for infringement of them.

65. Upon information and belief, Defendant has and continues to directly infringe at least claim 1 of the ’167 patent by making, using, selling, importing and/or providing and causing to be used without authority within the United States, a method of establishing a VPN tunnel between provider edge devices based on VPN capability discovery information (the “’167 Accused Instrumentalities”). The ’167 Accused Instrumentalities include at least ADTRAN’s NetVanta access routers (e.g. 3200, 3300, 3400, 4000, 5000 series) and private IP VPN network devices that support RFC44110/6514 or Border Gateway Protocol and Multiprotocol Label Switching BGP/MPLS. Services include Enhanced Network Care; Total Network Care, ProStart, ProCare, and ProCloud.

66. In particular, claim 1 of the ’167 patent generally recites a method of establishing a VPN tunnel between provide edge (“PE”) devices. The method includes advertising at least one tunnel-based parameter to one or more PE devices over a network backbone using an extension to an auto-discovery protocol, and determining VPN capability discovery information that includes at least one tunnel-based parameter; and negotiating between the PE devices to

automatically establish and configure a VPN tunnel between the PE devices based on the VPN capability discovery information.

67. On information and belief, use of the ’167 Accused Instrumentalities read on and infringe at least claim 1 of the ’167 patent. (*See*, *e.g.*, http://portal.adtran.com/web/page/portal/Adtran/group/9; http://portal.adtran.com/web/page/portal/Adtran/group/10; http://portal.adtran.com/web/page/portal/Adtran/group/118; http://portal.adtran.com/web/page/portal/Adtran/group/12; http://portal.adtran.com/web/page/portal/Adtran/group/13; http://stats.manticoretechnology.com/ImgHost/462/8290/PDFs/The%20Truth%20Behind%20Router%20Performance-ADTRAN%20vs%20Cisco.pdf?iframe=true&width=980&height=700; http://www.telephonecentral.com/lit/Adtran_PrivateIP_whitepaper.pdf; https://portal.adtran.com/web/page/portal/Adtran/wp_proservices; http://portal.adtran.com/web/page/portal/Adtran/wp_networkcare_landing. *Also see* RFC6514: BGP Encodings and Procedures for Multicast in MPLS/BGP IP VPNs (*available at* http://tools.ietf.org/pdf/rfc6514.pdf (*e.g*. p. 10 – 12)); and RFC4110: A Framework for Layer 3 Provider-Provisioned Virtual Private Networks (PPVPNs) (*available at* http://tools.ietf.org/search/rfc4110 (*e.g*. p. 2, 3, 15, 35, 42, 43)); and RFC6348: Requirements for Point-to-Multipoint Extensions to the Label Distribution Protocol (*available at* http://tools.ietf.org/search/rfc6348 (*e.g*. p. 12 – 13)).)

68. On information and belief, these ’167 Accused Instrumentalities are used, marketed, provided to, and/or used by or for Defendant’s partners, clients, customers and end users across the country and in this District.

69. Defendant was made aware of the ’167 patent and its infringement thereof at least as early as the filing of this Complaint.

70. Upon information and belief, since at least the time Defendant received notice, Defendant has induced and continues to induce others to infringe at least one claim of the ’167 patent under 35 U.S.C. § 271(b) by, among other things, and with specific intent or willful blindness, actively aiding and abetting others to infringe, including but not limited to Defendant’s partners, clients, customers, and end users, whose use of the ’167 Accused Instrumentalities constitutes direct infringement of at least one claim of the ’167 patent.

71. In particular, Defendant’s actions that aid and abet others such as its partners, customers, clients, and end users to infringe include advertising and distributing the ’167 Accused Instrumentalities and providing instruction materials, training, and services regarding the ’167 Accused Instrumentalities. On information and belief, Defendant has engaged in such actions with specific intent to cause infringement or with willful blindness to the resulting infringement because Defendant has had actual knowledge of the ’167 patent and knowledge that its acts were inducing infringement of the ’167 patent since at least the date Defendant received notice that such activities infringed the ’167 patent.

72. Upon information and belief, since at least the time Defendant received notice, Defendant is liable as a contributory infringer of the ’167 patent under 35 U.S.C. § 271(c) by offering to sell, selling and/or importing into the United States at least one or more components of the ’167 Accused Instrumentalities to be especially made or adapted for use in an infringement of the ’167 patent. The ’167 Accused Instrumentalities are a material component for use in practicing the ’167 patent and are specifically made and are not a staple article of commerce suitable for substantial non-infringing use.

73. Plaintiff has been harmed by Defendant's infringing activities.

COUNT V – INFRINGEMENT OF U.S. PATENT NO. 7,274,704

74. The allegations set forth in the foregoing paragraphs 1 through 73 are incorporated into this Fifth Claim for Relief.

75. On September 25, 2007, U.S. Patent No. 7,274,704 ("the '704 patent"), entitled "Piggybacking VPN Information in BGP for Network Based VPN Architectures," was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the '704 patent is attached as Exhibit 5.

76. The inventive embodiments of the '704 patent resolve technical problems related to dynamically managing the topology of a data network.

77. The claims of the '704 patent do not merely recite the performance of some business practice known from the pre-Internet world along with a requirement to perform it on the Internet. Instead, the claims of the '704 patent recite one or more inventive concepts that are rooted in computerized electronic communications networks, for example in virtual private networks (VPN) where the VPN information distribution protocol allows different networking systems to be used by different VPN services and by the network backbone.

78. The claims of the '704 patent recite an invention that is not merely the routine or conventional use of electronic devices for data transmission networks. Instead for example, the invention includes a VPN network device that incorporates a gateway protocol speaker that transmits messages in conformance with "BGP" protocol, and having VPN membership information, reachability information, tunnel mechanism information and so on. The '704 patent claims thus include recitations to the characteristics of the different types of information (*e.g.*

reachability information indicates type of VPN model, the network route by which a VPN can be reached).

79. The technology claimed in the ’704 patent does not preempt all ways of using computerized devices or transmitting information over networks, nor preempt any other well-known or prior art technology.

80. Accordingly, each claim of the ’704 patent recites a combination of elements sufficient to ensure that the claim in practice amounts to significantly more than a patent on an ineligible concept.

81. Plaintiff is the sole owner of the ’704 patent, including the right to assert all causes of action arising under the patents and the right to remedies for infringement of them.

82. Upon information and belief, Defendant has and continues to directly infringe at least claim 1 of the ’704 patent by making, using, selling, importing and/or providing and causing to be used without authority within the United States, for example, a network service having devices that includes the Border Gateway Protocol (the "’704 Accused Instrumentalities"). For example, the ’704 Accused Instrumentalities include at least Adtran’s access routers (e.g. NetVanta 3448, 3458, 1335, NetVanta 3300 series, 3400 series, 4000 series).

83. In particular, claim 1 of the ’704 patent generally recites a Border Gateway Protocol Speaker (BGP Speaker) in a communication system which implements a network based Virtual Private Network (NB-VPN) across a backbone, the NB-VPN using an Open System Interconnect (OSI) layer-2 protocol and an OSI layer-3 protocol, one or more of the NB-VPN using an OSI layer-2 protocol different from an OSI layer-2 protocol used by the backbone or using an OSI layer-3 protocol different from an OSI layer-3 protocol used by the backbone, the BGP Speaker operable to: transmit an Update message being in conformance with a Border

Gateway Protocol (BGP), the Update message further including: Virtual Private Network (VPN) Membership information that indicates an identification of a VPN to which the Update message relates; a VPN Reachability Mode field that indicates a type of VPN model being used by the VPN; VPN Reachability information that indicates at least one route by which the VPN can be reached; and Tunnel Mechanism information that indicates characteristics of a tunnel used to transport VPN packets across the backbone.

84. On information and belief, the ’704 Accused Instrumentalities read on and infringe at least claim 1 of the ’704 patent. (*See*, *e.g.*, https://portal.adtran.com/pub/Library/White_Papers/Private_IP_Service_BGP_MPLS_VPN_Networks.pdf; https://portal.adtran.com/pub/Library/Product_Brochures/International/IN966_Router_BR.pdf; http://portal.adtran.com/web/page/portal/Adtran/group/2889; http://portal.adtran.com/web/page/portal/Adtran/group/10; http://portal.adtran.com/web/page/portal/Adtran/group/118; https://portal.adtran.com/web/page/portal/Adtran/wp_proservices; http://portal.adtran.com/web/page/portal/Adtran/wp_networkcare_landing. *Also see* IETF RFC4664: Framework for Layer 2 Virtual Private Networks (*e.g*. p.1, 6, 15) (*available at* https://tools.ietf.org/search/rfc4664); RFC6074: Provisioning, Auto-Discovery, and Signaling in Layer 2 Virtual Private Networks (*e.g*. p.13) (*available at* https://tools.ietf.org/search/rfc6074); RFC4360 BGP: Extended Communities Attribute (*e.g*. p. 12, 14) (*available at* https://tools.ietf.org/search/rfc4360); RFC4760: Multiprotocol Extensions for BGP-4 (e.g. p. 1, 11-12, 14) (a*vailable at* https://tools.ietf.org/search/rfc4760).

85. On information and belief, these ’704 Accused Instrumentalities are used, marketed, provided to, and/or used by or for Defendant’s partners, clients, customers and end users across the country and in this District.

86. Upon information and belief, Defendant was made aware of the ’704 patent and its infringement thereof at least as early as the filing of this Complaint.

87. Upon information and belief, since at least the time Defendant received notice, Defendant has induced and continues to induce others to infringe at least one claim of the ’704 patent under 35 U.S.C. § 271(b), for example, with specific intent or willful blindness, by actively aiding and abetting others to infringe, including but not limited to Defendant’s partners, clients, customers, and end users, whose use of the ’704 Accused Instrumentalities constitutes direct infringement of at least one claim of the ’704 patent.

88. In particular, Defendant’s actions that aid and abet others such as its partners, customers, clients, and end users to infringe include advertising and distributing the ‘704 Accused Instrumentalities and providing instruction materials, training, and services regarding the ‘704 Accused Instrumentalities. On information and belief, Defendant has engaged in such actions with specific intent to cause infringement or with willful blindness to the resulting infringement because Defendant has had actual knowledge of the ’704 patent and knowledge that its acts were inducing infringement of the ’704 patent since at least the date Defendant received notice that such activities infringed the ’704.

89. Upon information and belief, since at least the time Defendant received notice, Defendant is liable as a contributory infringer of the ’704 patent under 35 U.S.C. § 271(c) by offering to sell, selling and importing/or into the United States at least one or more components of the ’704 Accused Instrumentalities to be especially made or adapted for use in an

infringement of the ’704 patent. The ‘704 Accused Instrumentalities are a material component for use in practicing the ’704 patent and are specifically made and are not a staple article of commerce suitable for substantial non-infringing use.

90. On information and belief, since at least the time Defendant received notice, Defendant’s infringement has been and continues to be willful.

91. Plaintiff has been harmed by Defendant’s infringing activities.

COUNT VI – INFRINGEMENT OF U.S. PATENT NO. 7,277,533

92. The allegations set forth in the foregoing paragraphs 1 through 91 are incorporated into this Sixth Claim for Relief.

93. On October 2, 2007, U.S. Patent No. 7,277,533 (“the ’533 patent”), entitled “Providing Calling Party Information in a Request to Establish a Call Session,” was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the ’533 patent is attached as Exhibit 6.

94. The inventive embodiments of the ’533 patent resolve technical problems related to procedures to establish call sessions in a packet based data network and voice communications over such data networks involving standards (*e.g*. SIP, H.323).

95. The claims of the ’533 patent do not merely recite the performance of some business practice known from the pre-Internet world along with a requirement to perform it on the Internet. Instead, the claims of the ’533 patent recite one or more inventive concepts that are rooted in electronic communications networks, for example in networks that enable VOIP to establish an interactive call session and providing certain information in a call request.

96. The claims of the ’533 patent recite an invention that is not merely the routine or conventional use of electronic devices for data transmission networks. Instead for example, the

invention includes a VOIP network device that establishes call sessions involving data packets. The ’533 patent claims thus include recitations to the characteristics of establishing an interactive call session such as involving Session Initiation Protocol control.

97. The technology claimed in the ’533 patent does not preempt all ways of using computerized devices or transmitting information over networks, nor preempt any other well-known or prior art technology.

98. Accordingly, each claim of the ’533 patent recites a combination of elements sufficient to ensure that the claim in practice amounts to significantly more than a patent on an ineligible concept.

99. Plaintiff is the owner of the ’533 patent, including the right to assert all causes of action arising under the patents and the right to remedies for infringement of them.

100. Upon information and belief, Defendant has and continues to directly infringe at least claims 1 – 3 of the ’533 patent by making, using, selling, importing and/or providing and causing to be used without authority within the United States, for example, network devices that includes call requests and interactive call sessions (the “’533 Accused Instrumentalities”). For example, the ’533 Accused Instrumentalities include at least Adtran’s Total Access 900 and 900e series gateways (*e.g*. TA916 and TA916e), NetVanta 7000 series, NetVanta Ethernet switches, MegaPath data-voice-security trunking service, ADTRAN’s IP phones (*e.g*. IP712, IP321, IP335, IP550), NetVanta 6240 family gateway, NetVanta 3140 and 3448 and 4660 routers; NetVanta 4430 border controller; and other products that support SIP. Services include Enhanced Network Care; Total Network Care, ProStart, ProCare, and ProCloud.

101. In particular, claim 1 of the ’533 patent generally recites a processor-implemented method of receiving a call request over a network from a network entity associated

with a calling party to establish an interactive call session; based on data contained in the call request, looking up information about the calling party; receiving the information about the calling party in response to looking up the information about the calling party; and providing the received information about the calling party in the call request.

102. On information and belief, use of the ’533 Accused Instrumentalities read on and infringe at least claim 1 of the ’533 patent. (*See*, *e.g.*, http://portal.adtran.com/web/page/portal/Adtran/group/38; https://www.voipsupply.com/catalogsearch/result/index/?ajaxcatalog=true&cat=&limit=10&p=5&q=sip, https://portal.adtran.com/web/page/portal/Adtran/group/2956; https://www.megapath.com/megapath2016/assets/file/support/voice/sip-guide-adtran.pdf; https://www.shoretel.com/partners/adtran; https://www.voipsupply.com/catalogsearch/result/index/?ajaxcatalog=true&cat=&limit=10&p=4&q=sip; https://www.voipsupply.com/catalogsearch/result/index/?ajaxcatalog=true&cat=&limit=10&manufacturer=1241&q=sip, https://portal.adtran.com/web/page/portal/Adtran/group/4254; https://portal.adtran.com/web/page/portal/Adtran/wp_proservices; http://portal.adtran.com/web/page/portal/Adtran/wp_networkcare_landing.)

103. Claim 2 of the ’533 patent generally recites the method of claim 1, wherein receiving the information comprises receiving the information from a storage device.

104. On information and belief, use of the ’533 Accused Instrumentalities read on and infringe at least claim 2 of the ’533 patent. (*See*, *e.g.*, https://portal.adtran.com/web/page/portal/Adtran/group/2956.)

105. Claim 3 of the ’533 patent generally recites the method of claim 2, wherein receiving the information comprises receiving the information from a database stored in the storage device.

106. On information and belief, use of the ’533 Accused Instrumentalities read on and infringe at least claim 2 of the ’533 patent. (*See, e.g.*, https://portal.adtran.com/web/page/portal/Adtran/group/2956.)

107. On information and belief, these ’533 Accused Instrumentalities are used, marketed, provided to, and/or used by or for Defendant’s partners, clients, customers and end users across the country and in this District.

108. Upon information and belief, Defendant was made aware of the ’704 patent and its infringement thereof at least as early as the filing of this Complaint.

109. Upon information and belief, since at least the time Defendant received notice, Defendant has induced and continues to induce others to infringe at least one claim of the ’533 patent under 35 U.S.C. § 271(b), for example, with specific intent or willful blindness, by actively aiding and abetting others to infringe, including but not limited to Defendant’s partners, clients, customers, and end users, whose use of the ’533 Accused Instrumentalities constitutes direct infringement of at least one claim of the ’533 patent.

110. In particular, Defendant’s actions that aid and abet others such as its partners, customers, clients, and end users to infringe include advertising and distributing the ‘533 Accused Instrumentalities and providing instruction materials, training, and services regarding the ‘533 Accused Instrumentalities. On information and belief, Defendant has engaged in such actions with specific intent to cause infringement or with willful blindness to the resulting infringement because Defendant has had actual knowledge of the ’533 patent and knowledge that its acts were inducing infringement of the ’533 patent since at least the date Defendant received notice that such activities infringed the ’533 patent.

111. Upon information and belief, since at least the time Defendant received notice, Defendant is liable as a contributory infringer of the ’533 patent under 35 U.S.C. § 271(c) by offering to sell, selling and importing/or into the United States at least one or more components of the ’533 Accused Instrumentalities to be especially made or adapted for use in an infringement of the ’533 patent. The ‘533 Accused Instrumentalities are a material component for use in practicing the ’533 patent and are specifically made and are not a staple article of commerce suitable for substantial non-infringing use.

112. On information and belief, since at least the time Defendant received notice, Defendant’s infringement has been and continues to be willful.

113. Plaintiff has been harmed by Defendant’s infringing activities.

114. Because some of the patents such as the ’999 and ’990 patents and sibling patents are necessary to practice standards (*e.g.* IEEE 802.1Q and/or IEEE 802.1x technology), ILEA agrees to license users of standards such as IEEE 802.1Q/x technology under the ‘999 and ’990 patent family on reasonable, and non-discriminatory (RAND) terms. ILEA intends to abide by such terms by furnishing a courtesy copy of this Complaint upon filing, in advance of service, so that the Parties may amicably agree to such a RAND royalty. ILEA intends to negotiate such RAND terms in good faith, and will be amenable to a delay of service and/or an immediate stay of the matter if Defendant also negotiates in good faith, so that no party need bear any unnecessary cost or expense. If Defendant contests the obligation to abide by such terms, through action or inaction, then Plaintiff shall proceed against any such Defendant as an unwilling licensee and pursue the highest damages and/or other relief available under the law.

JURY DEMAND

Pursuant to Rule 38 of the Federal Rules of Civil Procedure, Plaintiff demands a trial by jury on all issues triable as such.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff demands judgment for itself and against Defendant as follows:

A. An adjudication that Defendant has infringed the ’999, ’990, ’461, ’167, ’704, and ’533 patents;

B. An award of damages to be paid by Defendants adequate to compensate Plaintiff for Defendant’s past infringement of the ’999, ’990, ’461, ’167, ’704, and ’533 patents, including interest, costs, expenses and an accounting of all infringing acts including, but not limited to, those acts not presented at trial;

C. A declaration that this case is exceptional under 35 U.S.C. § 285, and an award of Plaintiff’s reasonable attorneys’ fees; and

D. An award to Plaintiff of such further relief at law or in equity as the Court deems just and proper.

Dated: May 15, 2017

DEVLIN LAW FIRM LLC

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